

**M**ore than 325 LFG energy projects are operational in the United States. Together, these projects have achieved significant reductions in the emission of methane, a potent heat trapping gas. They also have prevented emissions of carbon dioxide and harmful air pollutants such as sulfur dioxide, since using LFG for energy offsets the need to use nonrenewable resources such as coal and oil. In 2001, operational LFG energy projects in the United States prevented the release of approximately 14 million metric tons of carbon equivalent. Emissions reductions achieved from these projects provided the same climate benefits as eliminating the emissions of 12 million cars for one year; offsetting 132 million barrels of oil; or producing enough energy to power almost 1 million homes for one year.



## HOW TO BECOME PART OF THE LMOP NETWORK

**P**articipation in LMOP is easy. Partners (landfill owners and operators, communities, industry, states, and energy companies) can join the program free of charge by signing a voluntary memorandum of understanding (MOU) with LMOP. Under the conditions of this voluntary partnership, LMOP

provides technical and marketing assistance and information, while the Partner helps with the identification, development, and promotion of LFG use projects. Other organizations can participate as well. Simply contact LMOP to see how the network can help you develop your LFG use project.



**LANDFILL METHANE  
OUTREACH PROGRAM**

EPA-430-F-02-013  
Office of Air and Radiation (6202J)  
[www.epa.gov/lmop](http://www.epa.gov/lmop)  
October 2002

United States  
Environmental Protection Agency  
Office of Air and Radiation (6202J)  
Washington, DC 20460

Official Business  
Penalty for Private Use \$300

### ***By Mail:***

U.S. Environmental Protection  
Agency  
Landfill Methane Outreach Program  
Mail Code 6202J  
1200 Pennsylvania Ave., NW  
Washington, DC 20460

### ***By Phone:***

1-888-782-7937

### ***By Internet:***

[www.epa.gov/lmop](http://www.epa.gov/lmop)

# LANDFILL METHANE OUTREACH PROGRAM

CREATING PARTNERSHIPS AND POWER FROM LANDFILL GAS





**T**he U.S. Environmental Protection Agency's Landfill Methane Outreach Program (LMOP) helps protect the environment and build a sustainable future by promoting the recovery and beneficial use of landfill gas (LFG). LFG contains methane, a potent heat trapping gas that can be captured and used to power businesses, greenhouses, vehicles, and homes. By finding ways to use this gas, LMOP helps prevent global warming and air pollution, encourages development of a renewable energy source, and promotes local economic development.

## LMOP PARTNERS

**L**MOP fosters a network of Partners who promote the capture and use of landfill gas as a renewable resource. More than 300 landfill owners and operators, businesses, communities, states, and industry groups are current LMOP Partners.

- ◆ *State Partners* include state air and solid waste departments, energy and economic development offices, universities, and nongovernmental organizations.

- ◆ *Energy Partners* include power providers, marketers, and energy end users.

- ◆ *Industry Partners* include engineers, developers, consultants, equipment suppliers, and landfill owners and operators.

- ◆ *Community Partners* include landfill owners and operators and nonprofit organizations.

- ◆ *Key Industry Trade and Public Sector Association Endorsers.*

## LMOP OFFERS SOLUTIONS

**L**MOP facilitates the development of LFG use projects through hands-on assistance to Partners and stakeholders. With its available tools, information, and experience, LMOP can tailor its assistance to individual landfills, providing customized solutions to project challenges.

### TECHNICAL RESOURCES

LMOP offers products and services to guide project stakeholders through the development process, such as:

- ◆ Feasibility studies
- ◆ Identification of potential end users
- ◆ A project development handbook and software
- ◆ A brochure on the steps to LFG energy project development
- ◆ The LMOP database of operational, under construction, and planned LFG projects and candidate landfills for potential development
- ◆ Technical fact sheets

### FINANCING LFG PROJECTS

Securing funding for LFG projects is often the biggest hurdle to project development. LMOP helps Partners think creatively about funding options and find answers to tough financing questions. The Program's experience, tools, and network of experts provide communities and landfill owners with easy access to information on appropriate funding sources. LMOP's *Funding Landfill Gas Projects—A Guide to State, Federal, and Foundation Resources* provides the latest information on potential financing options, such as grants, low-interest loans, and tax incentives.

### PROJECT MARKETING

Having trouble marketing the benefits of your LFG use project? LMOP works with communities, landfills, government officials, utilities, power marketers, and developers to increase awareness and build support for a project. LMOP outreach tools for Partners

have already helped many new projects address site-specific concerns. LMOP can also provide the necessary tools to plan a ribbon cutting and site tour or to conduct outreach to the media and community.

In addition, LMOP provides the following outreach tools:

- ◆ *LFG and Green Power* brochure
- ◆ *Energizing Your Community with LFG* video
- ◆ *Landfill Gas Energy Projects: Public Health, Safety, and the Environment* fact sheet
- ◆ LFG energy project case studies

### REGULATORY & OTHER ISSUES

LMOP works diligently to keep on top of critical issues affecting the LFG industry. LMOP tracks and reports on regulatory and permitting developments, legislative initiatives, and electricity restructuring efforts. LMOP can also help landfills demonstrate the benefits of LFG use to the community and regulatory agencies.

Helpful LMOP materials include:

- ◆ State-specific primers, which outline the LFG project approval process
- ◆ How to estimate the environmental benefits of projects
- ◆ Renewable energy market information

### NETWORKING & RECOGNITION

Through the Partner programs, LMOP creates a vital network of landfills, states, communities, and companies interested in LFG use. Through this network, LMOP lowers barriers and increases the likelihood that projects will become operational. The networking support LMOP provides its Partners includes:

- ◆ The LMOP *Gazette* and broadcast e-mails to bring Partners the latest news and information
- ◆ An annual conference
- ◆ State workshops
- ◆ An annual awards program
- ◆ A Web site where Partner information is featured

## SUCCESS STORIES

**W**hen the **Blue Ridge Resource Conservation and Development Council** wanted to construct greenhouse facilities and craft studios on the closed Yancey/Mitchell and Avery County landfill in North Carolina, it called LMOP for help. LMOP presented the benefits of LFG utilization to the community, conducted the initial feasibility analysis, suggested project design ideas, and helped identify funding options. By working closely with local leaders to answer community and technical questions, LMOP has helped ensure the success of the Yancey/Mitchell and Avery projects.

**T**he **Screaming Eagle Landfill** in South Carolina was ready and eager to develop a LFG project but lacked a key ingredient: a gas purchaser. Because of a lack of potential candidates, landfill owner Waste Management, Inc., turned to LMOP for help. LMOP

performed an energy end-user analysis to search for potential energy users and evaluate candidates. LMOP then facilitated a meeting between the landfill and the end user. Because of LMOP's assistance, this project is now under development.

**E**lectric utility **AMP-Ohio** of Cleveland was interested in ways to meet customer demand for green power. They asked LMOP to facilitate a one-day training session on green pricing and green power marketing. After the training session, AMP-Ohio issued a Request for Proposal for 35 MW of LFG energy. Consumers eager to protect the environment have already committed to purchasing over 30 MW of this green power.